

REMARKS

Summary of Office Action

Claims 1-76 have previously been canceled. Claims 77, 84, 88, 91, 98, 102, 105, 111, 115, and 118 have been amended. Claims 119 and 120 have been added. Claims 78-83, 85-87, 89, 90, 92-97, 99-101, 103, 104, 106-110, 112-114, 116, and 117 are also currently pending in the above-identified patent application. No new subject matter has been added as a result of the amendments or additions to the claims.

Claims 77-79 and 92 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Chu U.S. Patent 4,934,799 (hereinafter "Chu").

Claims 80 and 83 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chu in view of Eisenberger U.S. Patent 4,028,547 (hereinafter "Eisenberger").

Claims 81 and 82 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chu in view of Yokomatsu et al. U.S. Patent 4,810,889 (hereinafter "Yokomatsu").

Claims 84-86, 90, 93, 98, 104, 106, 107, 111, and 117 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chu in view of Greschner et al. U.S. Patent 4,393,127 (hereinafter "Greschner").

Claim 87 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chu in view of Greschner and Eisenberger.

Claims 88 and 89 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chu in view of Greschner and Yokomatsu.

Claims 91, 94, 95, and 108 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chu in view of Greschner and Hori et al. U.S. Patent 5,188,706 (hereinafter "Hori").

Claims 96, 97, 109, and 110 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chu in view of

Greschner and Celler et al. U.S. Patent 5,051,326 (hereinafter "Celler").

Claims 99-101, 103, 105, 112-114, 116, and 118 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chu in view of Greschner and Murooka et al. U.S. Patent 5,166,962 (hereinafter "Murooka").

Claims 102 and 115 have been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reconsideration and allowance of this application in light of the following remarks is hereby respectfully requested.

The Rejections Based on 35 U.S.C. § 102

The Examiner rejected claims 77-79 and 92 under 35 U.S.C. § 102(b) as being anticipated by Chu.

Applicant's amended independent claim 77 defines a method "using an array of exposure cells, wherein at least one of the exposure cells exposes separate areas of a surface to be exposed, . . . and wherein the exposure cells are capable of independent simultaneous operation."

Nowhere does Chu show or suggest "an array of exposure cells," let alone an "array of exposure cells" that are "capable of independent simultaneous operation," and "wherein at least one of the exposure cells exposes separate areas of a surface to be exposed," as required by applicant's amended independent claim 77. Instead, Chu merely describes a means for maintaining and/or adjusting the focus (i.e., the diameter) of a single laser beam as it scans a wafer for lithographic patterning (see, e.g., Chu, column 3, lines 15-19)..

Thus, for at least the above reasons, applicant's amended independent claim 77 is allowable over Chu. Applicant respectfully requests, therefore, that the rejection under

35 U.S.C. § 102(b) of claim 77, and any claims dependent therefrom, including claims 78, 79, and 92, be withdrawn.

The Rejections Based on 35 U.S.C. § 103

Claims 84-86, 90, 93, 98, 104, 106, 107, 111, and 117

Claims 84-86, 90, 93, 98, 104, 106, 107, 111, and 117 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chu in view of Greschner.

Applicant's amended independent claim 84 defines a method for "providing an array of exposure cells, wherein at least one of the exposure cells exposes separate areas of a surface to be exposed, . . . and wherein the exposure cells are capable of independent simultaneous operation."

Nowhere does Chu show or suggest "an array of exposure cells," let alone an "array of exposure cells" that are "capable of independent simultaneous operation," and "wherein at least one of the exposure cells exposes separate areas of a surface to be exposed," as required by applicant's amended independent claim 84. Instead, Chu merely describes a means for maintaining and/or adjusting the focus (i.e., the diameter) of a single laser beam as it scans a wafer for lithographic patterning (see, e.g., Chu, column 3, lines 15-19).

Nowhere does Greschner show or suggest "an array of exposure cells" that are "capable of independent simultaneous operation," and "wherein at least one of the exposure cells exposes separate areas of a surface to be exposed," as required by applicant's amended independent claim 84. Instead, Greschner merely describes a structure that may be used as "an aperture for electron beams, or as a mask for X-rays," (Greschner, abstract). Furthermore, nowhere does Greschner show or suggest "providing a low stress and elastic dielectric layer on the substrate," as required by applicant's amended independent claim 84. Instead, Greschner merely describes multiple dielectric layers with alternating tensile and compressive

stresses to compensate for the stress of each tensile or compressive dielectric layer (see, e.g., Greschner, column 5, lines 39-50).

Thus, for at least the above reasons, applicant's amended independent claim 84 is allowable over Chu in view of Greschner. Applicant respectfully requests, therefore, that the rejection under 35 U.S.C. § 103(a) of independent claim 84, and any claims dependent therefrom, including claims 85, 86, 90, 93, 98, 104, 106, 107, 111, 117, 119, and 120, be withdrawn.

Claims 80 and 83

Claims 80 and 83 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chu in view of Eisenberger.

As applicant has pointed out above, amended independent claim 77 is patentable over Chu. For at least the foregoing reasons, claims 80 and 83, each of which depends from claim 77, is patentable over Chu in view of Eisenberger. As such, applicant respectfully requests that the rejection under 35 U.S.C. § 103(a) of claims 80 and 83 be withdrawn.

Claims 81 and 82

Claims 81 and 82 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chu in view of Yokomatsu.

As applicant has pointed out above, amended independent claim 77 is patentable over Chu. For at least the foregoing reasons, claims 81 and 82, each of which depends from claim 77, is patentable over Chu in view of Yokomatsu. As such, applicant respectfully requests that the rejection under 35 U.S.C. § 103(a) of claims 81 and 82 be withdrawn.

Claim 87

Claim 87 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chu in view of Greschner and Eisenberger.

As applicant has pointed out above, amended independent claim 84 is patentable over Chu in view of Greschner. For at least the foregoing reasons, claim 87, which

depends from claim 84, is patentable over Chu in view of Greschner and Eisenberger. As such, applicant respectfully requests that the rejection under 35 U.S.C. § 103(a) of claim 87 be withdrawn.

Claims 88 and 89

Claims 88 and 89 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chu in view of Greschner and Yokomatsu.

As applicant has pointed out above, amended independent claim 84 is patentable over Chu in view of Greschner. For at least the foregoing reasons, claims 88 and 89, each of which depends from claim 84, is patentable over Chu in view of Greschner and Yokomatsu. As such, applicant respectfully requests that the rejection under 35 U.S.C. § 103(a) of claims 88 and 89 be withdrawn.

Claims 91, 94, 95, and 108

Claims 91, 94, 95, and 108 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chu in view of Greschner and Hori.

As applicant has pointed out above, amended independent claim 84 is patentable over Chu in view of Greschner. For at least the foregoing reasons, claims 91 and 108, each of which depends from claim 84, is patentable over Chu in view of Greschner and Hori. Furthermore, as applicant has pointed out above, amended independent claim 77 is patentable over Chu. For at least the foregoing reasons, claims 94 and 95, each of which depends from claim 77, is patentable over Chu in view of Greschner and Hori. As such, applicant respectfully requests that the rejection under 35 U.S.C. § 103(a) of claims 91, 94, 95, and 108 be withdrawn.

Claims 96, 97, 109, and 110

Claims 96, 97, 109, and 110 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chu in view of Greschner and Celler.

As applicant has pointed out above, amended independent claim 84 is patentable over Chu in view of Greschner. For at least the foregoing reasons, claims 109 and 110, each of which depends from claim 84, is patentable over Chu in view of Greschner and Celler. Furthermore, as applicant has pointed out above, amended independent claim 77 is patentable over Chu. For at least the foregoing reasons, claims 96 and 97, each of which depends from claim 77, is patentable over Chu in view of Greschner and Celler. As such, applicant respectfully requests that the rejection under 35 U.S.C. § 103(a) of claims 96, 97, 109, and 110 be withdrawn.

Claims 99-101, 103, 105, 112-114, 116, and 118

Claims 99-101, 103, 105, 112-114, 116, and 118 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chu in view of Greschner and Murooka.

As applicant has pointed out above, amended independent claim 84 is patentable over Chu in view of Greschner. For at least the foregoing reasons, claims 112-114, 116, and 118, each of which depends from claim 84, is patentable over Chu in view of Greschner and Murooka. Furthermore, as applicant has pointed out above, amended independent claim 77 is patentable over Chu. For at least the foregoing reasons, claims 99-101, 103, and 105, each of which depends from claim 77, is patentable over Chu in view of Greschner and Murooka. As such, applicant respectfully requests that the rejection under 35 U.S.C. § 103(a) of claims 99-101, 103, 105, 112-114, 116, and 118 be withdrawn.

The Objections to the Claims

The Examiner stated on page 12, lines 1-3 of the Office Action that each of claims 102 and 115 would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims.

Claim 102

Applicant has amended claim 102 to be in independent form including all of the limitations of its base claim 77 and any intervening claims, including claim 93. Therefore, applicant respectfully submits that independent claim 102, and any claims that depend therefrom, are in condition for allowance.

Claim 115

Applicant has amended claim 115 to be in independent form including all of the limitations of its base claim 84 and any intervening claims, including claim 107. Therefore, applicant respectfully submits that independent claim 115, and any claims that depend therefrom, are in condition for allowance.

As such, applicant respectfully requests that the objection of claims 102 and 115 be withdrawn.

Conclusion

The foregoing demonstrates that claims 77-120 are allowable. This application is therefore in condition for allowance. An early and favorable action is respectfully requested.

Respectfully submitted,



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